**Abstract**

A detector for detecting the volume of fuel in a fuel tank includes a float for floating on the surface of the fuel, a magnetically conductive member, a magnet, and a sensor for sensing the strength of a magnetic field. The field from the magnet passes through the magnetically conductive member and the sensor is positioned near an outer surface of the magnetically conductive member where it can detect a portion of the field passing through the magnetically conductive member. An arm connects the float to one of the magnetically conductive member and the sensor for moving the one relative to the other. The shape of the magnetically conductive member is a function of the volume of fuel in the tank and the strength of the portion of the magnetic field detected by the sensor is proportional to the fuel in the tank. An output from the sensor controls an indicator that provides a measurement of the fuel in the tank.